

Marta Castellote

List of Publications by Year in descending order

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115
papers

3,555
citations

159573

30
h-index

144002

57
g-index

117
all docs

117
docs citations

117
times ranked

2490
citing authors

#	ARTICLE	IF	CITATIONS
1	Chloride threshold values to depassivate reinforcing bars embedded in a standardized OPC mortar. Cement and Concrete Research, 2000, 30, 1047-1055.	11.0	425
2	Chemical changes and phase analysis of OPC pastes carbonated at different CO ₂ concentrations. Materials and Structures/Materiaux Et Constructions, 2009, 42, 515-525.	3.1	296
3	Chloride threshold dependence of pitting potential of reinforcements. Electrochimica Acta, 2002, 47, 3469-3481.	5.2	194
4	Composition and microstructural changes of cement pastes upon heating, as studied by neutron diffraction. Cement and Concrete Research, 2004, 34, 1633-1644.	11.0	189
5	Measurement of the steady and non-steady-state chloride diffusion coefficients in a migration test by means of monitoring the conductivity in the anolyte chamber. Comparison with natural diffusion tests. Cement and Concrete Research, 2001, 31, 1411-1420.	11.0	134
6	Potentiostatic determination of chloride threshold values for rebar depassivation. Electrochimica Acta, 2004, 49, 2731-2739.	5.2	105
7	Characteristics and efficiency of photocatalytic cementitious materials: Type of binder, roughness and microstructure. Cement and Concrete Research, 2015, 71, 124-131.	11.0	103
8	Accelerated carbonation of cement pastes in situ monitored by neutron diffraction. Cement and Concrete Research, 2008, 38, 1365-1373.	11.0	99
9	Natural and accelerated CO ₂ binding kinetics in cement paste at different relative humidities. Cement and Concrete Research, 2013, 49, 21-28.	11.0	94
10	TiO ₂ and TiO ₂ •SiO ₂ coated cement: Comparison of mechanic and photocatalytic properties. Applied Catalysis B: Environmental, 2015, 178, 155-164.	20.2	88
11	Electrokinetic remediation of dredged sediments polluted with heavy metals with different enhancing electrolytes. Electrochimica Acta, 2012, 86, 102-109.	5.2	76
12	Chloride-binding isotherms in concrete submitted to non-steady-state migration experiments. Cement and Concrete Research, 1999, 29, 1799-1806.	11.0	71
13	Modelling the carbonation of cementitious matrixes by means of the unreacted-core model, UR-CORE. Cement and Concrete Research, 2008, 38, 1374-1384.	11.0	63
14	Measurement of ageing effect on chloride diffusion coefficients in cementitious matrices. Journal of Nuclear Materials, 2011, 412, 209-216.	2.7	62
15	Electrochemical removal of chlorides. Cement and Concrete Research, 2000, 30, 615-621.	11.0	57
16	Effect of the marine environment on reinforced concrete durability in Iberoamerican countries: DURACON project/CYTED. Corrosion Science, 2007, 49, 2832-2843.	6.6	56
17	Accelerated simultaneous determination of the chloride depassivation threshold and of the non-stationary diffusion coefficient values. Corrosion Science, 2002, 44, 2409-2424.	6.6	54
18	Non-steady-state chloride diffusion coefficients obtained from migration and natural diffusion tests. Part I: Comparison between several methods of calculation. Materials and Structures/Materiaux Et Constructions, 2000, 33, 21-28.	3.1	49

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19	Quantification of hydroxyl radicals on cementitious materials by fluorescence spectrophotometry as a method to assess the photocatalytic activity. <i>Cement and Concrete Research</i> , 2015, 74, 108-115.	11.0	49
20	Oxygen and chloride diffusion in cement pastes as a validation of chloride diffusion coefficients obtained by steady-state migration tests. <i>Cement and Concrete Research</i> , 2001, 31, 621-625.	11.0	46
21	Round-Robin Test on methods for determining chloride transport parameters in concrete. <i>Materials and Structures/Materiaux Et Constructions</i> , 2006, 39, 955-990.	3.1	46
22	Relation between colourimetric chloride penetration depth and charge passed in migration tests of the type of standard ASTM C1202-91. <i>Cement and Concrete Research</i> , 1999, 29, 417-421.	11.0	45
23	Evolution of pore solution chemistry, electro-osmosis and rebar corrosion rate induced by realkalisation. <i>Materials and Structures/Materiaux Et Constructions</i> , 1999, 32, 427-436.	3.1	45
24	Some principles of service life calculation of reinforcements and in situ corrosion monitoring by sensors in the radioactive waste containers of El Cabril disposal (Spain). <i>Journal of Nuclear Materials</i> , 2006, 358, 82-95.	2.7	45
25	Ground water leaching resistance of high and ultra high performance concretes in relation to the testing convection regime. <i>Cement and Concrete Research</i> , 2006, 36, 1583-1594.	11.0	38
26	Hydroxyl radical and free and shallowly trapped electron generation and electron/hole recombination rates in TiO ₂ photocatalysis using different combinations of anatase and rutile. <i>Applied Catalysis A: General</i> , 2018, 565, 20-25.	4.3	37
27	Round-Robin test on chloride analysis in concrete – Part I: Analysis of total chloride content. <i>Materials and Structures/Materiaux Et Constructions</i> , 2001, 34, 532-549.	3.1	34
28	In-situ monitoring the realkalisation process by neutron diffraction: Electroosmotic flux and portlandite formation. <i>Cement and Concrete Research</i> , 2006, 36, 791-800.	11.0	32
29	Feasibility of determining corrosion rates by means of stray current-induced polarisation. <i>Journal of Applied Electrochemistry</i> , 2008, 38, 1467-1476.	2.9	31
30	Alkaline leaching method for the determination of the chloride content in the aqueous phase of hardened cementitious materials. <i>Cement and Concrete Research</i> , 2001, 31, 233-238.	11.0	30
31	TiO ₂ cement-based materials: Understanding optical properties and electronic band structure of complex matrices. <i>Catalysis Today</i> , 2017, 287, 203-209.	4.4	30
32	Modelling of the processes during steady-state migration tests: Quantification of transference numbers. <i>Materials and Structures/Materiaux Et Constructions</i> , 1999, 32, 180-186.	3.1	29
33	NO _x removal efficiency of urban photocatalytic pavements at pilot scale. <i>Science of the Total Environment</i> , 2020, 719, 137459.	8.0	29
34	Photocatalytic behavior of colored mortars containing TiO ₂ and iron oxide based pigments. <i>Construction and Building Materials</i> , 2017, 144, 300-310.	7.2	28
35	Round-robin test on chloride analysis in concrete – Part II: Analysis of water soluble chloride content. <i>Materials and Structures/Materiaux Et Constructions</i> , 2001, 34, 589-596.	3.1	27
36	Selecting enhancing solutions for electrokinetic remediation of dredged sediments polluted with fuel. <i>Journal of Environmental Management</i> , 2015, 151, 153-159.	7.8	26

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37	In situ evaluation of the NO _x removal efficiency of photocatalytic pavements: statistical analysis of the relevance of exposure time and environmental variables. <i>Environmental Science and Pollution Research</i> , 2019, 26, 36088-36095.	5.3	24
38	Influence of the composition of the binder and the carbonation on the zeta potential values of hardened cementitious materials. <i>Cement and Concrete Research</i> , 2006, 36, 1915-1921.	11.0	23
39	Hydrogen embrittlement of high-strength steel submitted to slow strain rate testing studied by nuclear resonance reaction analysis and neutron diffraction. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007, 259, 975-983.	1.4	23
40	Heterogeneous photocatalysis on construction materials: effect of catalyst properties on the efficiency for degrading NO _x and self cleaning. <i>Materiales De Construcción</i> , 2014, 64, e013.	0.7	23
41	Thermogravimetric analysis for monitoring carbonation of cementitious materials. <i>Journal of Thermal Analysis and Calorimetry</i> , 2012, 110, 309-319.	3.6	22
42	Advancements in non-destructive control of efficiency of electrochemical repair techniques. <i>Corrosion Engineering Science and Technology</i> , 2009, 44, 108-118.	1.4	19
43	Physico-chemical material characterization of historic unreinforced masonry buildings: The first step for a suitable intervention. <i>Construction and Building Materials</i> , 2013, 40, 352-360.	7.2	19
44	Controlling the Levels of Airborne Pollen: Can Heterogeneous Photocatalysis Help?. <i>Environmental Science & Technology</i> , 2013, 47, 11711-11716.	10.0	17
45	Expansive concretes with photocatalytic activity for pavements: Enhanced performance and modifications of the expansive hydrates composition. <i>Construction and Building Materials</i> , 2019, 218, 394-403.	7.2	17
46	Photocatalytic BiOX Mortars under Visible Light Irradiation: Compatibility, NO _x Efficiency and Nitrate Selectivity. <i>Catalysts</i> , 2020, 10, 226.	3.5	17
47	Nondestructive Decontamination of Mortar and Concrete by Electro-Kinetic Methods: Application to the Extraction of Radioactive Heavy Metals. <i>Environmental Science & Technology</i> , 2002, 36, 2256-2261.	10.0	16
48	Influence of the inlet air in efficiency of photocatalytic devices for mineralization of VOCs in air-conditioning installations. <i>Environmental Science and Pollution Research</i> , 2014, 21, 11198-11207.	5.3	16
49	Degradation of pollen on nanofunctionalized photocatalytic materials. <i>Journal of Chemical Technology and Biotechnology</i> , 2017, 92, 210-216.	3.2	16
50	Quick assessment of the photocatalytic activity of TiO ₂ construction materials by nitroblue tetrazolium (NBT) ink. <i>Construction and Building Materials</i> , 2019, 214, 1-8.	7.2	16
51	Phenomenological mass-balance-based model of migration tests in stationary conditions. <i>Cement and Concrete Research</i> , 2000, 30, 1885-1893.	11.0	15
52	Assessment of urban air pollution related to potential nanoparticle emission from photocatalytic pavements. <i>Journal of Environmental Management</i> , 2020, 272, 111059.	7.8	15
53	Environmental impact of nano-functionalized construction materials: leaching of titanium and nitrates from photocatalytic pavements under outdoor conditions. <i>Science of the Total Environment</i> , 2020, 744, 140817.	8.0	15
54	Electrochemical chloride extraction: influence of testing conditions and mathematical modelling. <i>Advances in Cement Research</i> , 1999, 11, 63-80.	1.6	14

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55	Turning waste into valuable resource: potential of electric arc furnace dust as photocatalytic material. <i>Environmental Science and Pollution Research</i> , 2014, 21, 12091-12098.	5.3	14
56	From analysis to decision: Revision of a multifactorial model for the in situ assessment of NOx abatement effectiveness of photocatalytic pavements. <i>Chemical Engineering Journal</i> , 2020, 402, 126250.	12.7	14
57	High-capacity adsorbents from stainless steel slag for the control of dye pollutants in water. <i>Environmental Science and Pollution Research</i> , 2021, 28, 23896-23910.	5.3	14
58	Face Mask Wastes as Cementitious Materials: A Possible Solution to a Big Concern. <i>Materials</i> , 2022, 15, 1371.	2.9	14
59	Radioactively Contaminated Electric Arc Furnace Dust as an Addition to the Immobilization Mortar in Low- and Medium-Activity Repositories. <i>Environmental Science & Technology</i> , 2004, 38, 2946-2952.	10.0	13
60	Assessment of electrophoresis and electroosmosis in construction materials: effect of enhancing electrolytes and heavy metals contamination. <i>Journal of Applied Electrochemistry</i> , 2010, 40, 1195-1208.	2.9	12
61	Chloride Electroremediation in reinforced structures: preliminary electrochemical tests to detect the steel repassivation during the treatment. <i>Electrochimica Acta</i> , 2015, 181, 288-300.	5.2	12
62	Determinación del contenido de OH ⁻ en la fase acuosa de los poros de matrices cementantes por un método empírico de lixiviación. <i>Materiales De Construccion</i> , 2002, 52, 39-56.	0.7	12
63	Neutron diffraction for studying the influence of the relative humidity on the carbonation process of cement pastes. <i>Journal of Physics: Conference Series</i> , 2011, 325, 012015.	0.4	11
64	Evaluation of changes in surface temperature of TiO ₂ functionalized pavements at outdoor conditions. <i>Energy and Buildings</i> , 2021, 237, 110817.	6.7	11
65	Influencia del electrolito externo en el flujo electroosmótico inducido por realcalinización. <i>Materiales De Construccion</i> , 2003, 53, 101-112.	0.7	11
66	Characterization of transport of caesium, strontium, cobalt and iron ions through concrete by steady-state migration and natural diffusion tests. <i>Advances in Cement Research</i> , 1999, 11, 161-168.	1.6	10
67	Photocatalytic decomposition of pollen allergenic extracts of <i>Cupressus arizonica</i> and <i>Platanus hybrida</i> . <i>Chemical Engineering Journal</i> , 2016, 286, 560-570.	12.7	10
68	New Holistic Conceptual Framework for the Assessment of the Performance of Photocatalytic Pavement. <i>Frontiers in Chemistry</i> , 2020, 8, 743.	3.6	10
69	Challenges in quantification of photocatalytic NO ₂ abatement effectiveness under real world exposure conditions illustrated by a case study. <i>Science of the Total Environment</i> , 2021, 766, 144393.	8.0	10
70	Non-steady-state chloride diffusion coefficients obtained from migration and natural diffusion tests. Part II: Different experimental conditions. Joint relations. <i>Materials and Structures/Materiaux Et Constructions</i> , 2001, 34, 323-331.	3.1	9
71	A new leaching test based in a running water system to evaluate long-term water resistance of concretes. <i>Advances in Cement Research</i> , 2002, 14, 157-168.	1.6	9
72	Nanoscale studies of cement chemistry with ¹⁵ N resonance reaction analysis. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005, 241, 441-445.	1.4	9

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73	PIXE/RBS as a tool to study cementitious materials: Application to the dynamic leaching of concrete. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 3670-3674.	1.4	9
74	Accelerated leaching of ultra high performance concretes by application of electrical fields to simulate their natural degradation. Materials and Structures/Materiaux Et Constructions, 2003, 36, 81-90.	3.1	8
75	Synchrotron Radiation Diffraction Study of the Microstructure Changes in Cement Paste due to Accelerated Leaching by Application of Electrical Fields. Journal of the American Ceramic Society, 2002, 85, 631-635.	3.8	8
76	Electrokinetic decontamination of heavy metals in construction materials: contribution of the different parameters to the global efficiency. Journal of Applied Electrochemistry, 2011, 41, 695-703.	2.9	8
77	Photoelectrochemical global approach to the behaviour of nanostructured anatase under different irradiation conditions. Catalysis Today, 2022, 397-399, 286-295.	4.4	8
78	Synergetic adsorption-photocatalysis process for water treatment using TiO ₂ supported on waste stainless steel slag. Environmental Science and Pollution Research, 2022, 29, 39712-39722.	5.3	7
79	Chloride transference numbers in steady-state migration tests. Magazine of Concrete Research, 2000, 52, 93-100.	2.0	6
80	Reply to the discussion of the paper "Chloride threshold values to depassivate reinforcing bars embedded in a standardized OPC mortar" by T.U. Mohammed and H. Hamada. Cement and Concrete Research, 2001, 31, 839-840.	11.0	6
81	Comparison between several methods for determining the depassivation threshold value for corrosion onset. European Physical Journal Special Topics, 2006, 136, 79-88.	0.2	6
82	Neutron diffraction as a tool to monitor the establishment of the electro-osmotic flux during realisation of carbonated concrete. Physica B: Condensed Matter, 2006, 385-386, 526-528.	2.7	6
83	Photocatalytic Activity for NO Degradation by Construction Materials: Parametric Study and Multivariable Correlations. Journal of Advanced Oxidation Technologies, 2010, 13, .	0.5	6
84	In situ accelerated leaching of cement paste by application of electrical fields monitored by synchrotron X-ray diffraction. Applied Physics A: Materials Science and Processing, 2004, 79, 661-669.	2.3	5
85	Preparation of Co-doped TiO ₂ for Photocatalytic Degradation of NO _x in Air under Visible Light. Journal of Advanced Oxidation Technologies, 2009, 12, .	0.5	5
86	Heavy ion beam measurement of the hydration of cementitious materials. Applied Radiation and Isotopes, 2010, 68, 683-687.	1.5	5
87	Understanding cementitious materials in fresh state: A nano-scale study on the effect of the mixing time. Journal of Alloys and Compounds, 2012, 536, S569-S574.	5.5	5
88	Interaction dynamics between a contaminated dredged sediment and extracting solutions of different nature. Journal of Soils and Sediments, 2020, 20, 2664-2671.	3.0	5
89	Photocatalytic Activity of Zn _x Mn _{3-x} O ₄ Oxides and ZnO Prepared From Spent Alkaline Batteries. Frontiers in Chemistry, 2020, 8, 661.	3.6	5
90	Electrokinetic approach to assess the behaviour of a contaminated marine sediment. Journal of Soils and Sediments, 2020, 20, 2673-2684.	3.0	5

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91	Guidelines for assessing the valorization of a waste into cementitious material: dredged sediment for production of self compacting concrete. <i>Materiales De Construccion</i> , 2015, 65, e057.	0.7	5
92	In situ hydration of Portland cement monitored by neutron diffraction. <i>Applied Physics A: Materials Science and Processing</i> , 2002, 74, s1224-s1226.	2.3	4
93	Ageing management program for the Spanish low and intermediate level waste disposal and spent fuel and high-level waste centralised storage facilities. <i>EPJ Web of Conferences</i> , 2011, 12, 01003.	0.3	4
94	Rapid assessment of the photocatalytic activity in construction materials: Pros and cons of reductive inks and oxidative fluorescence probes versus standardized NOx testing. <i>Catalysis Today</i> , 2020, 358, 164-171.	4.4	4
95	Triboemission of FINE and Ultrafine Aerosol Particles: A New Approach for Measurement and Accurate Quantification. <i>Lubricants</i> , 2020, 8, 21.	2.9	4
96	Primary and Secondary Emissions of VOCs and PAHs in Indoor Air from a Waterproof Coal-Tar Membrane: Diagnosis and Remediation. <i>International Journal of Environmental Research and Public Health</i> , 2021, 18, 12855.	2.6	4
97	Sediment as a dynamic natural resource“from catchment to open sea. <i>Journal of Soils and Sediments</i> , 2020, 20, 2541-2545.	3.0	3
98	Unusual photodegradation reactions of Asteraceae and Poaceae grass pollen enzymatic extracts on P25 photocatalyst. <i>Environmental Science and Pollution Research</i> , 2021, 28, 24206-24215.	5.3	3
99	Accelerated leaching of ultra high performance concretes by application of electrical fields to simulate their natural degradation. <i>Materials and Structures/Materiaux Et Constructions</i> , 2003, 36, 81-90.	3.1	3
100	MetodologÃa para la intervenciÃn en elementos histÃricos: el caso de la espadaÃa del convento de Nuestra SeÃora de la ConsolaciÃn (AlcalÃ de Henares-Madrid-EspaÃa). <i>Informes De La Construccion</i> , 2013, 65, 359-366.	0.3	3
101	A neutron“diffraction study of changes induced in aluminous cement paste by the application of external electric fields. <i>Physica B: Condensed Matter</i> , 2004, 350, E561-E564.	2.7	2
102	Modelamiento del proceso de carbonataciÃn del hormigÃn (UR-CORE), con datos de conversiÃn fraccional obtenidos a travÃs de experimentos de difracciÃn de neutrones monitoreados in-situ. <i>Revista Ingenieria De Construccion</i> , 2009, 24, .	0.4	2
103	Electrochemical treatment to condition contaminated EAFD as addition to immobilisation mortar in low level waste concrete containers. <i>Corrosion Engineering Science and Technology</i> , 2011, 46, 190-194.	1.4	2
104	Preliminary Study of the Influence of Supplementary Cementitious Materials on the Application of Electro Remediation Processes. <i>Materials</i> , 2021, 14, 6126.	2.9	2
105	Progress in Nanoscale Studies of Hydrogen Reactions in Construction Materials. , 2009, , 131-138.		2
106	Durability and Safety Performance of Pavements with Added Photocatalysts. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 11277.	2.5	1
107	The Use of Polarization Resistance to Evaluate the Environmental Impact on Reinforced Concrete Structures in the Iberoamerican Region. <i>ECS Transactions</i> , 2007, 3, 111-116.	0.5	0
108	Efficiency control of electrochemical repair techniques. , 2008, , 31-37.		0

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109	Neutron diffraction as a tool in the study of reinforced concrete. Compilation of some cases. Journal of Physics: Conference Series, 2014, 549, 012028.	0.4	0
110	Optimum calcination temperature in the synthesis of a N-C-S co-doped TiO ₂ photocatalyst, as monitored by neutron diffraction. Journal of Physics: Conference Series, 2014, 549, 012026.	0.4	0
111	Optimising processing conditions for the functionalisation of photocatalytic glazes by ZnO nanoparticle deposition. Materiales De Construccion, 2021, 71, e261.	0.7	0
112	Efecto de la aplicaci3n de campos el3ctricos sobre las interacciones entre los iones cloruro y la matriz de cemento. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2004, 43, 565-568.	1.9	0
113	Assessment of the behaviour of concrete in the initiation period of chloride induced corrosion of rebars. , 2008, , 155-156.		0
114	Tests for Leaching and Degradation in Soft or Carbonated Waters. RILEM State-of-the-Art Reports, 2013, , 235-250.	0.7	0
115	A new leaching test based in a running water system to evaluate long-term water resistance of concretes. Advances in Cement Research, 2002, 14, 157-168.	1.6	0